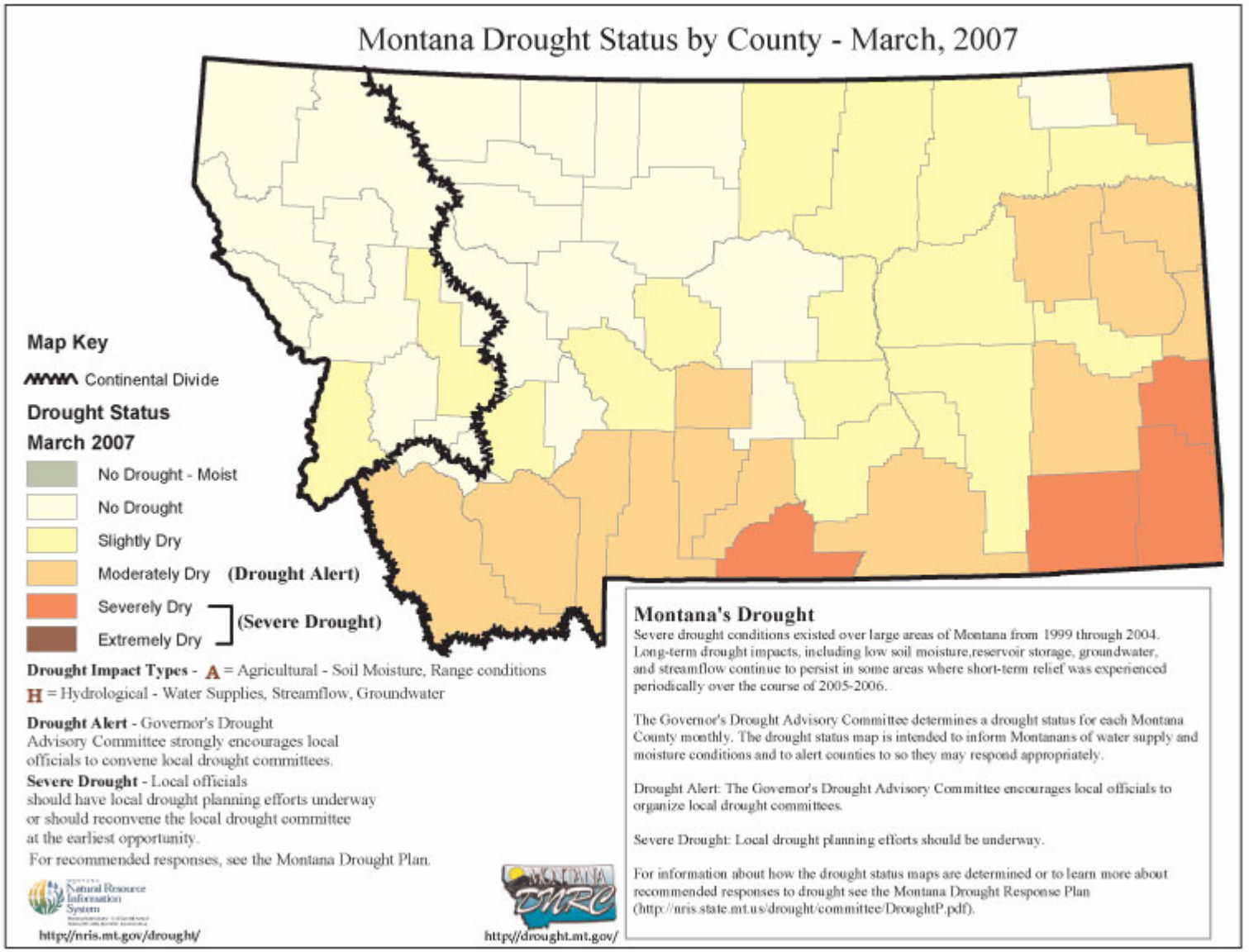
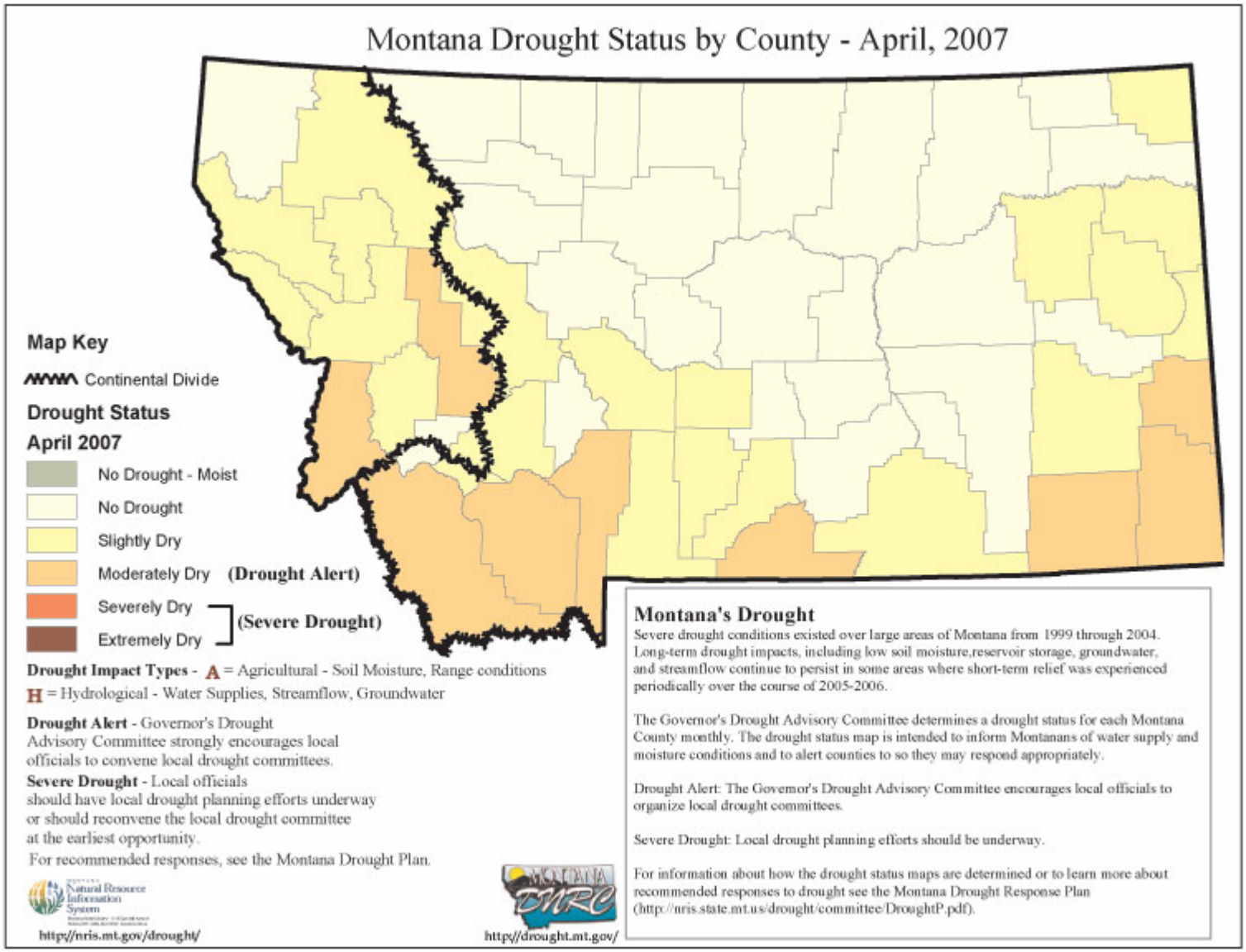
Montana Drought Status - March



Montana Drought Status - April



Governor's Drought Advisory Committee Meeting

April 19, 2007

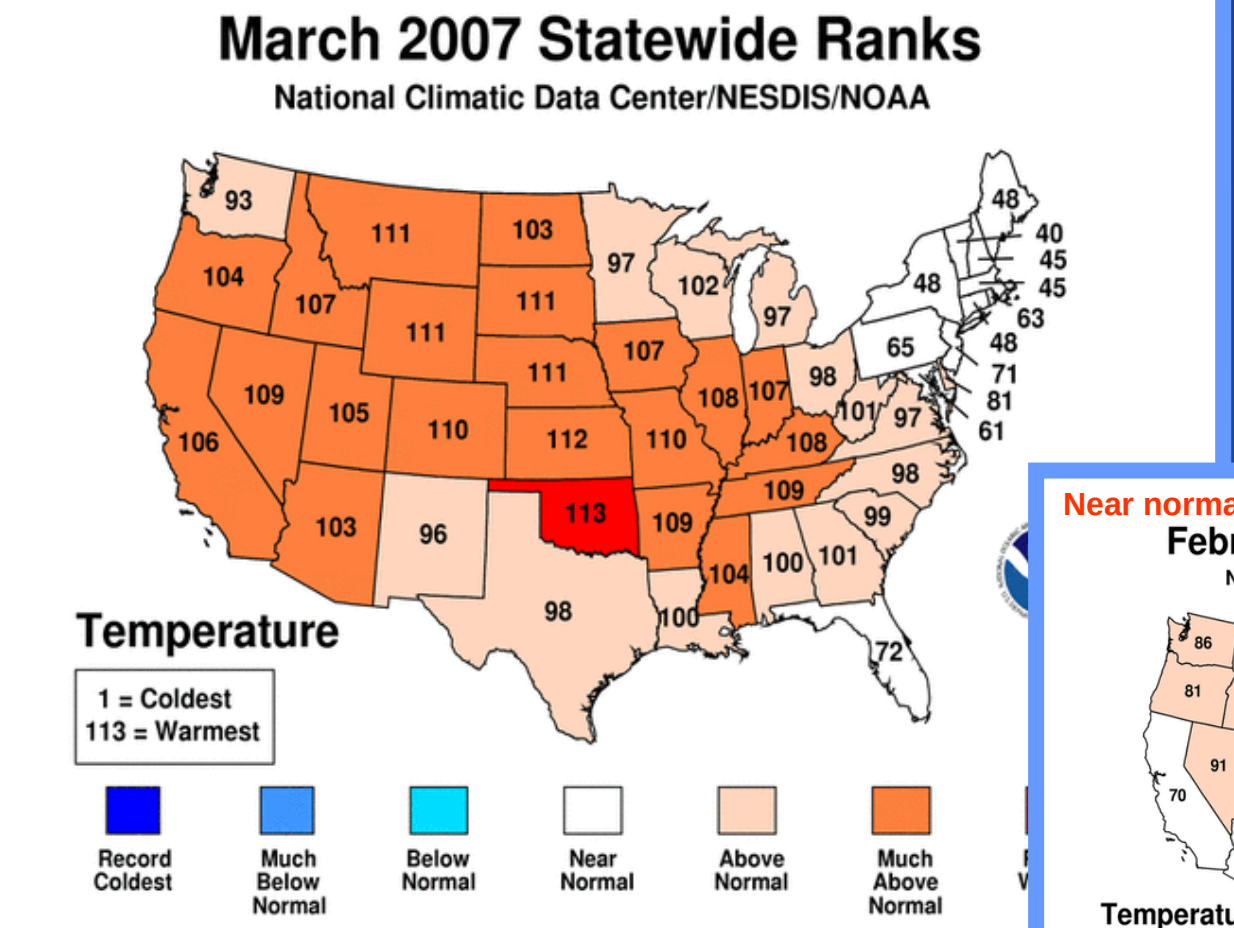
National Weather Service

Gina Loss

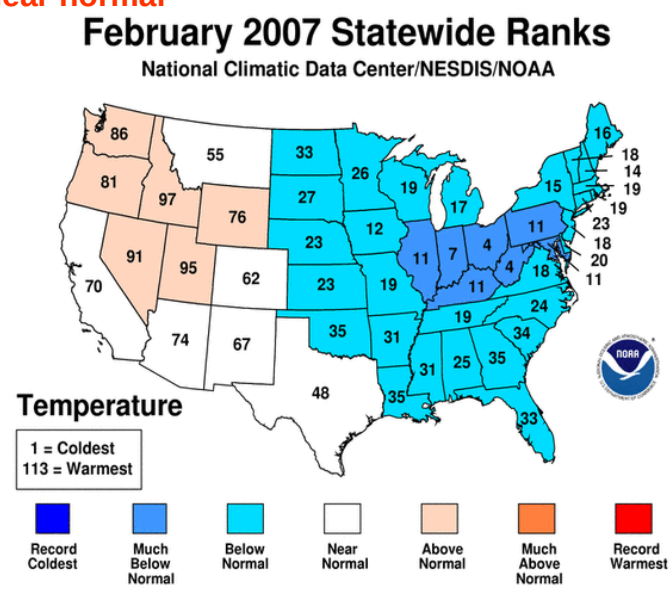
Temperature Rankings

Averaged Across Entire State

3rd warmest

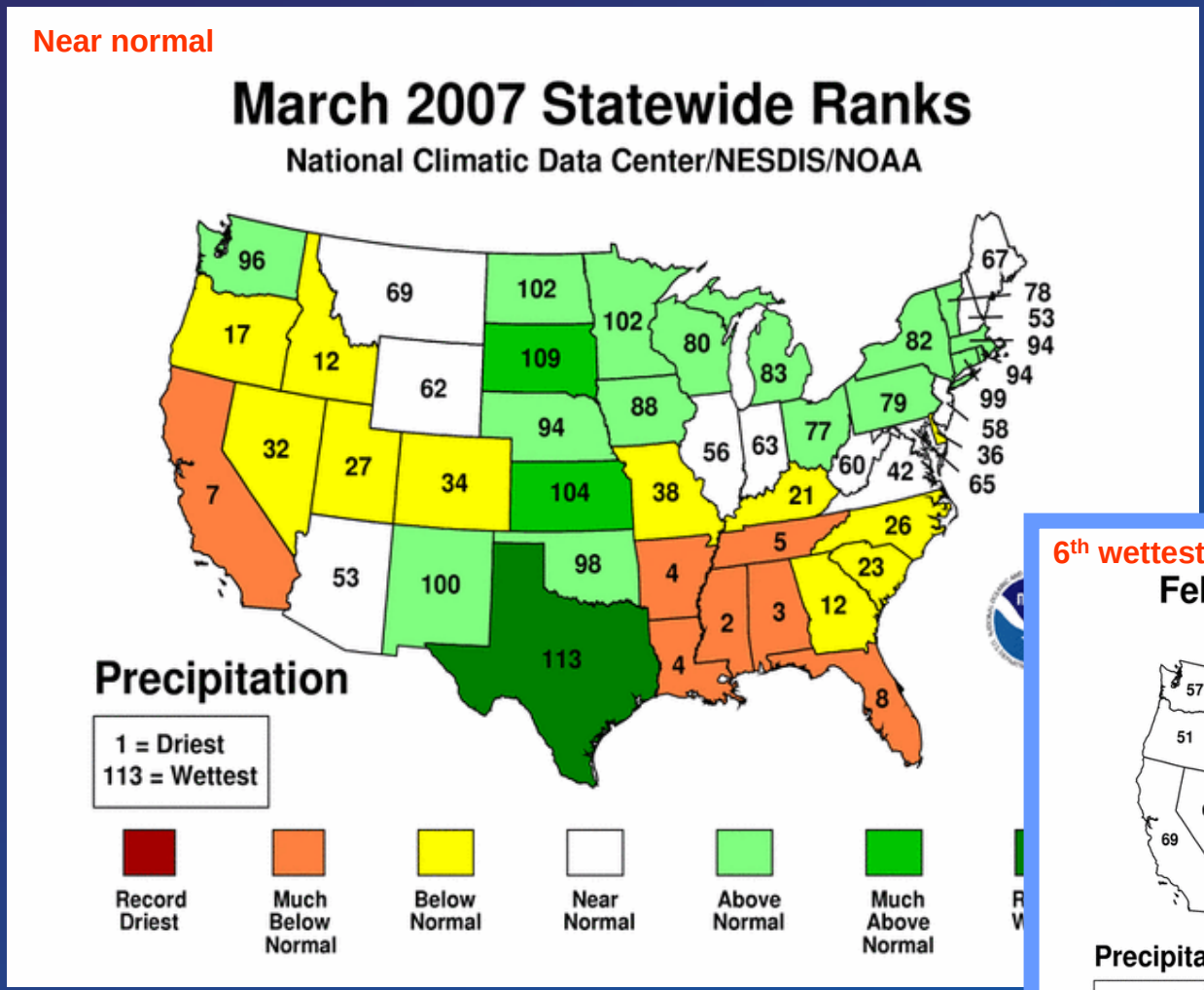


Near normal

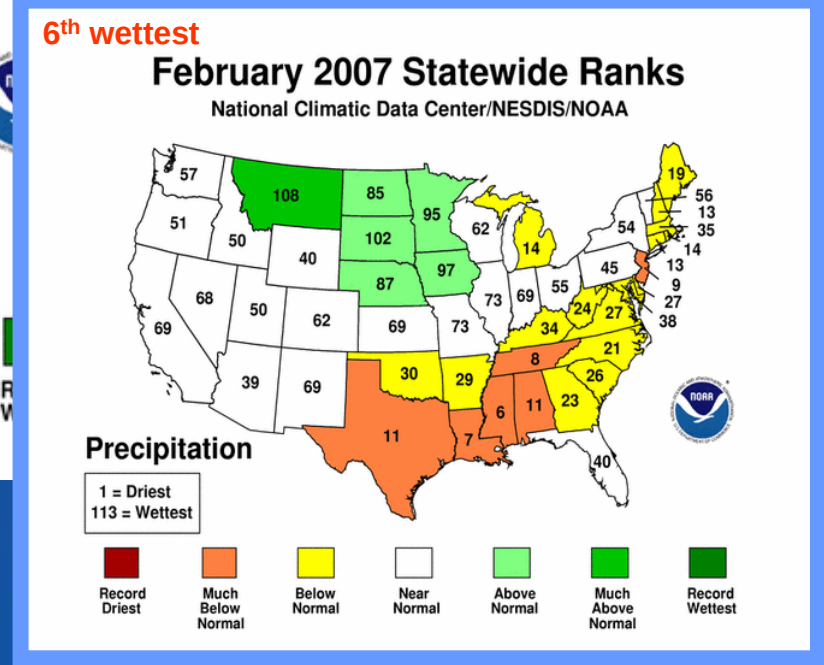


Temperature Rankings
Averaged Across Entire State

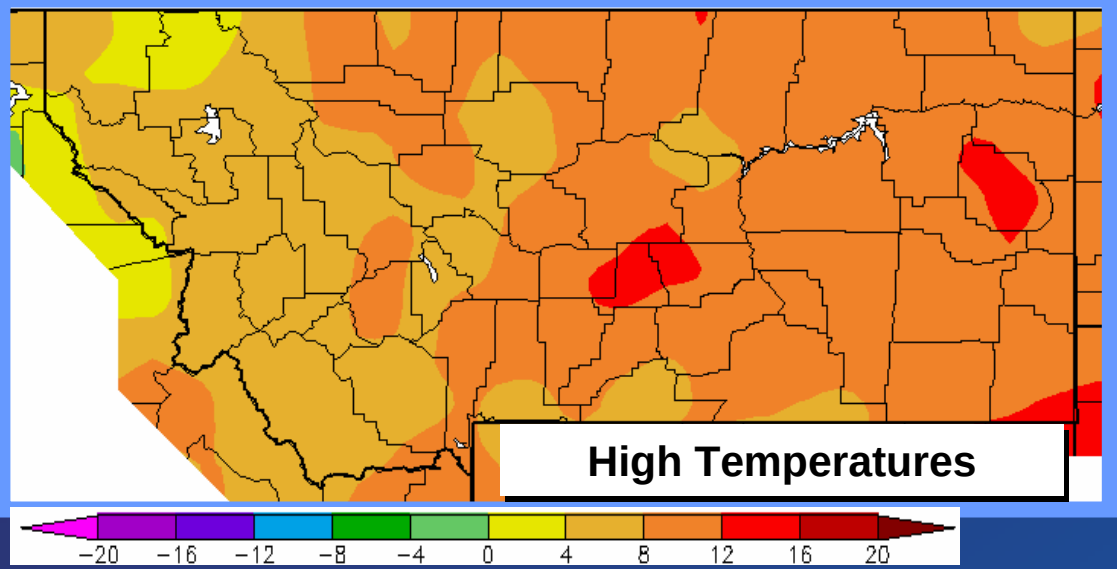
Near normal

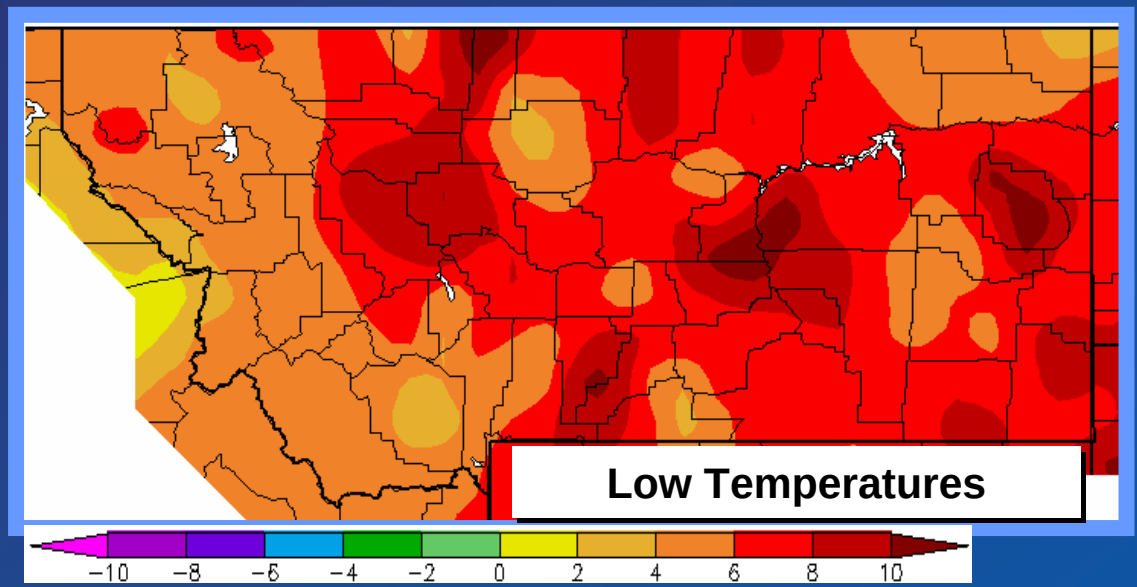


6th wettest



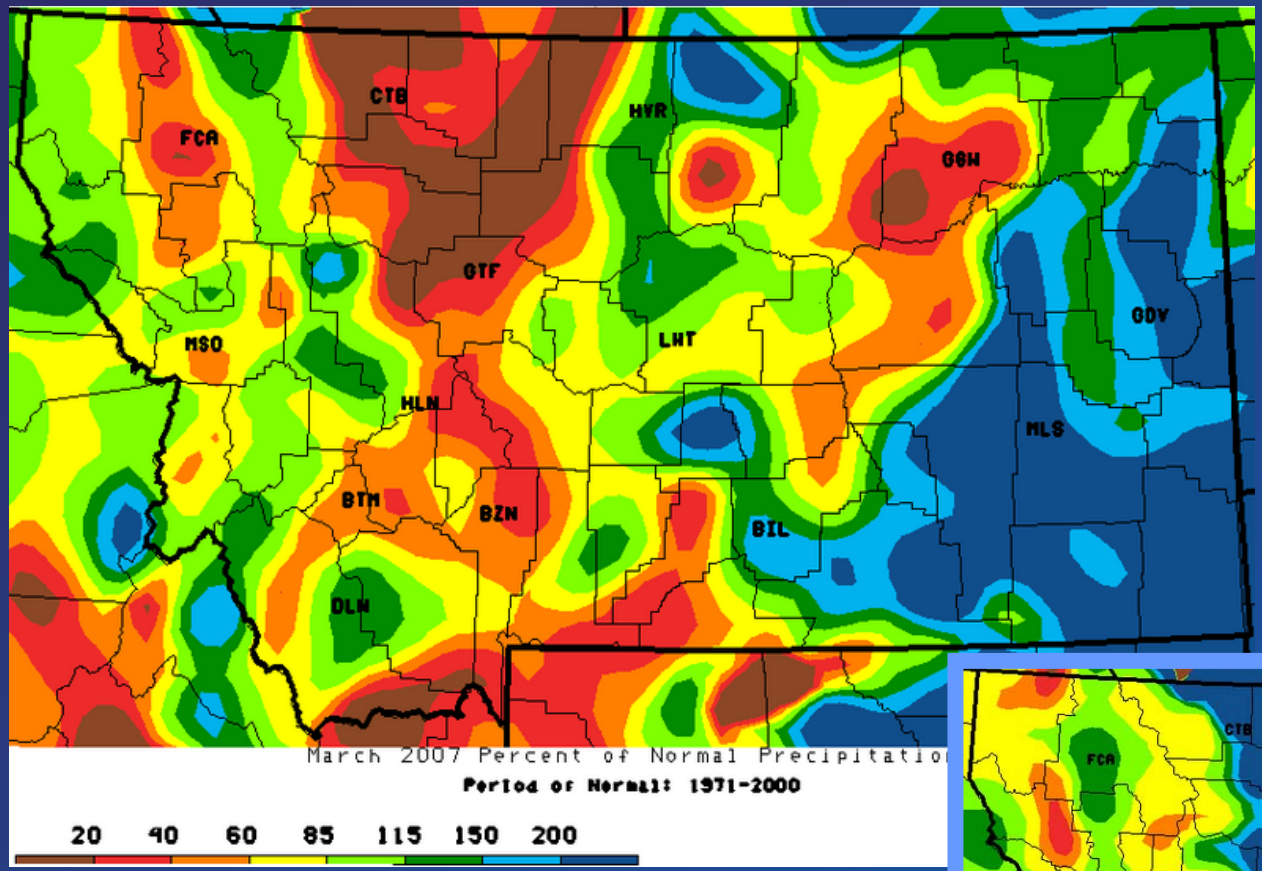
Temperature Anomalies
March 2007



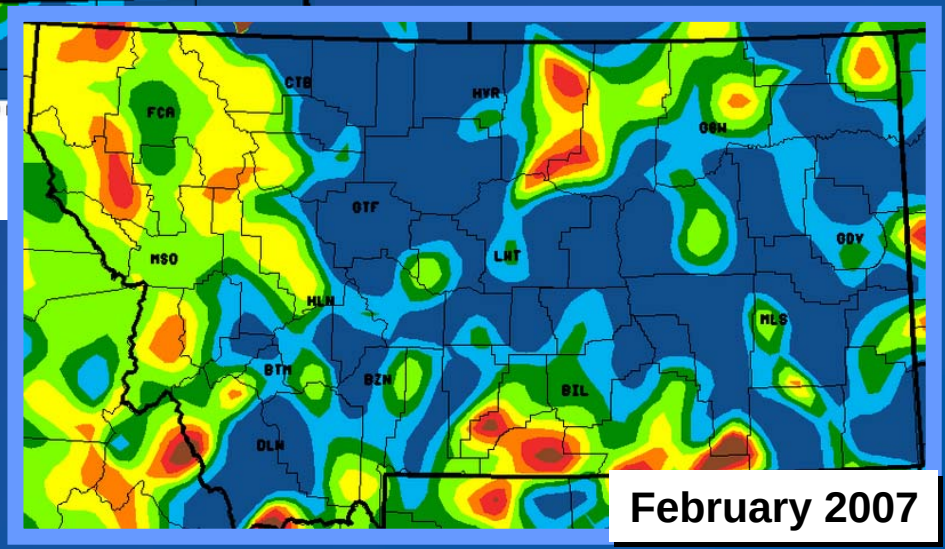


- Temperatures averaged near normal
- Highs
  - *West and southwest mostly 4 to 8 degrees above normal*
  - *East of divide mostly 8 to 12 degrees above normal*
- Lows
  - *West of divide – 4 to 6 degrees above normal*
  - *East of divide – 4 to 10 degrees above normal*

Percent of Normal Precipitation
March 2007



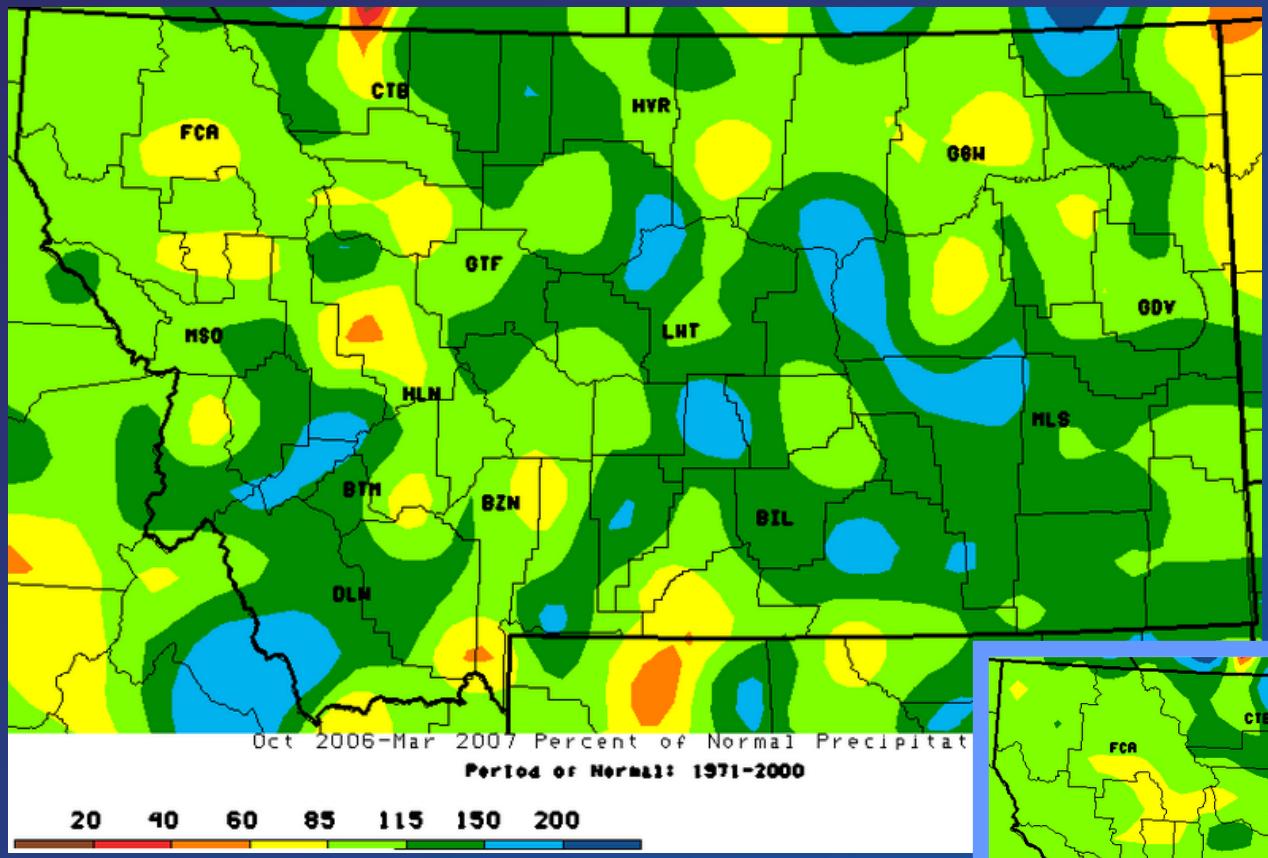
- Dry most of March
- Large storm last half of last week
  - *Significant snowfall over southeast*
- Still large areas below to well below normal
  - *Front range and adjacent plains*
  - *Extreme southwest*



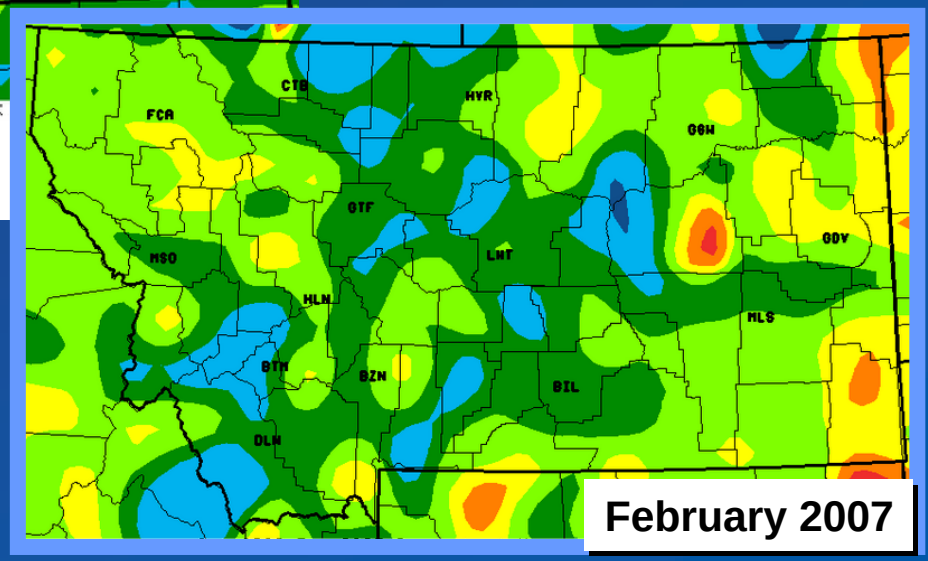
February 2007

Percent of Normal Precipitation

Water Year 2007



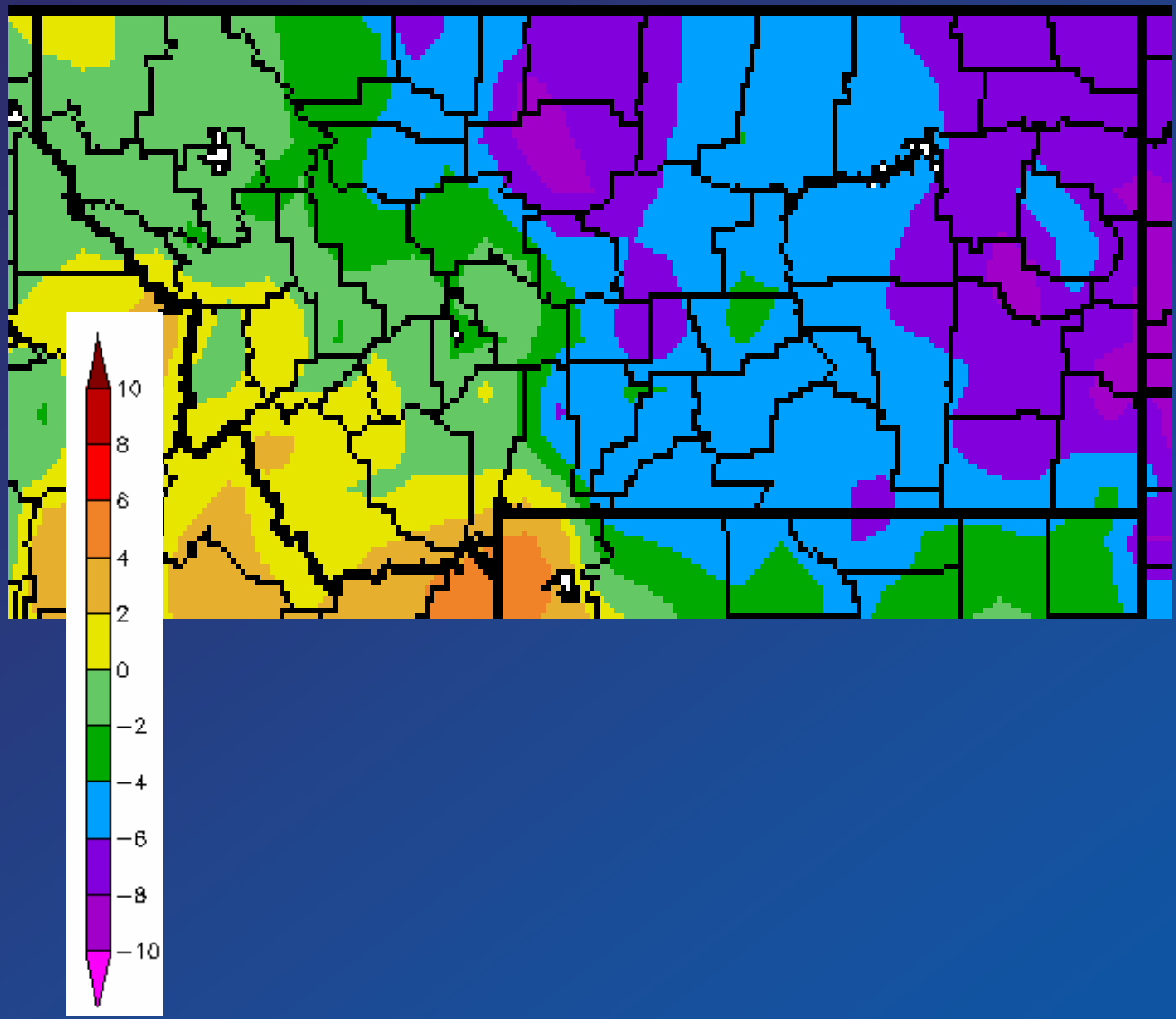
- October 2006 – March 2007
- Most of Montana averaging at least near normal
  - *Central... southwest and southeast above to well above normal*
  - *Southeast improved over status through February*



February 2007

Departure from Average Temperature

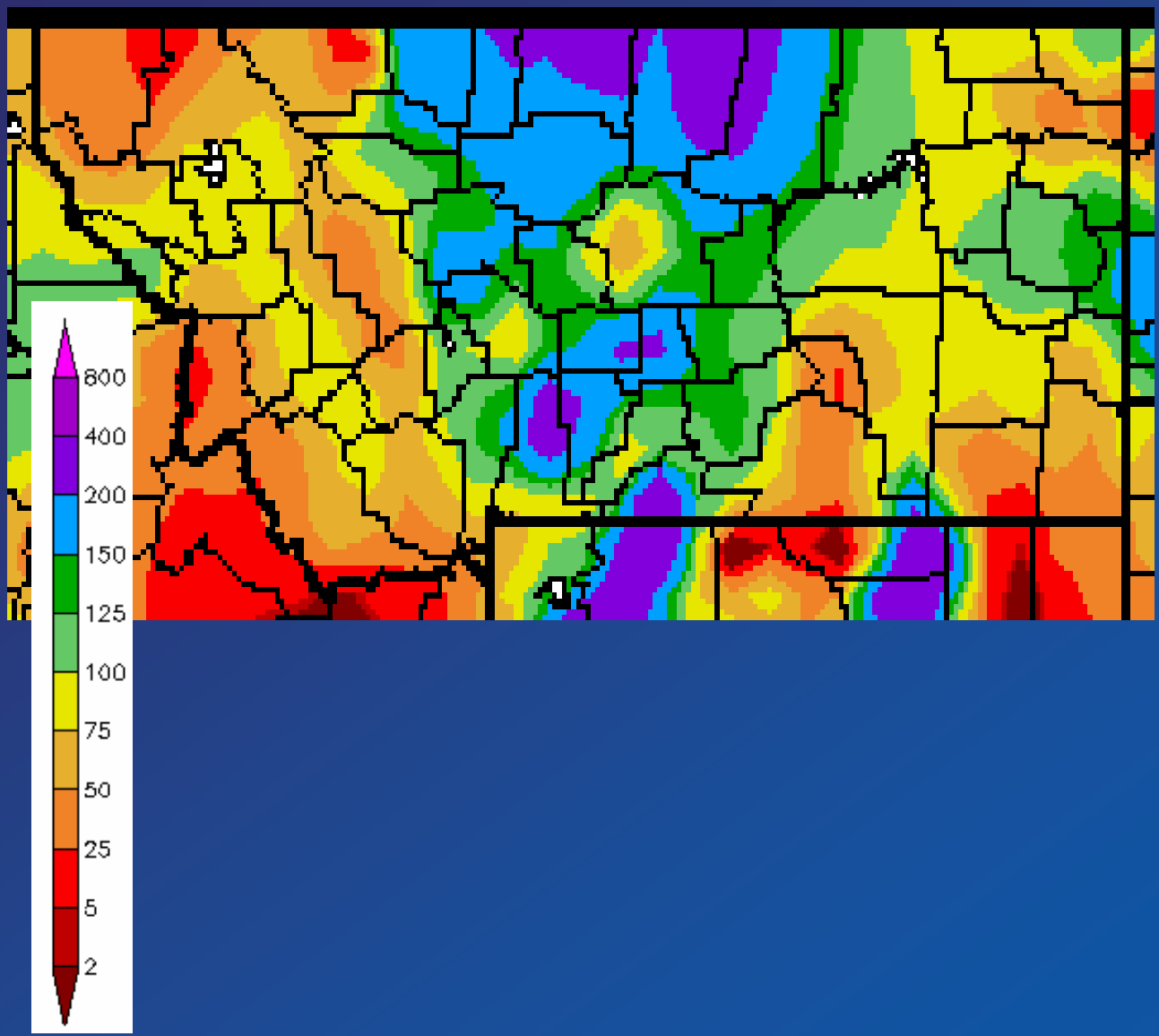
April 1 – April 17, 2006



- Cool overall
- West – Near normal
- East – 4 to 8 degrees below normal

Percent of Average Precipitation

April 1 – April 17, 2006



- West of divide – Generally below to well below normal
  - *Valleys nearer to normal*
- Central – Above to well above normal
  - *Pockets with more than 200% of normal!*
- Northeast – Generally near normal
- Southeast – Below to well below normal

Precipitation Totals

April and Water Year 2007

	APRIL 1 - 30				WATER YEAR TO DATE			
	ACTUAL PCPN	NRML PCPN	+/- NRML	% OF NRML	ACTUAL PCPN	NRML PCPN	+/- NRML	% OF NRML
WESTERN MONTANA								
BUTTE	1.18	1.02	0.16	116	5.11	4.77	0.34	107
KALISPELL	0.89	1.22	-0.33	73	6.84	9.01	-2.17	76
MISSOULA	0.81	0.94	-0.13	86	6.72	5.57	1.15	121
MULLAN PASS	1.58	2.61	-1.03	61	38.63	34.91	3.72	111
SOUTHWEST MONTANA								
BIG SKY	2.43	1.11	1.32	219	11.31	9.92	1.39	114
BOULDER	0.45	0.76	-0.31	59	3.57	3.58	-0.01	100
BELGRADE FIELD	1.87	1.40	0.47	134	6.70	6.05	0.65	111
BOZEMAN MSU	2.94	2.06	0.88	143	13.38	8.50	4.88	157
DILLON AIRPORT	1.14	0.95	0.19	120	4.61	3.17	1.44	145
DIVIDE	1.03	0.00	1.03	0	3.71	0.00	3.71	0
ENNIS	1.37	1.30	0.07	105	6.77	5.19	1.58	130
HELENA	0.82	0.91	-0.09	90	3.93	4.02	-0.09	98
ROGERS PASS 9 NNE	2.21	1.57	0.64	141	6.88	6.75	0.13	102
TOWNSEND	0.83	0.71	0.12	117	3.72	3.23	0.49	115
W YELLOWSTONE	0.34	1.51	-1.17	23	6.85	12.67	-5.82	54
WISDOM	0.88	0.98	-0.10	90	5.26	5.03	0.23	105

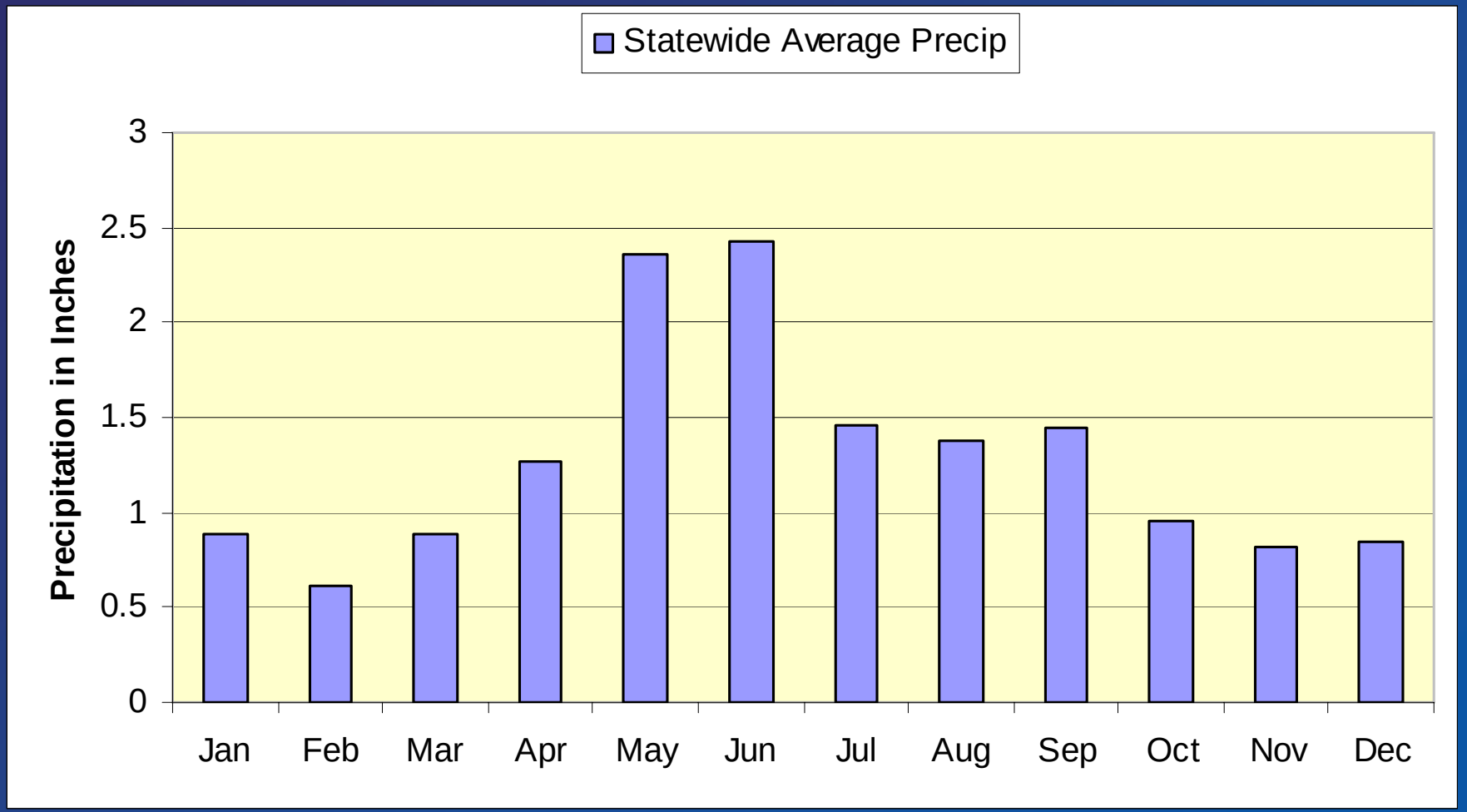
Precipitation Totals

April and Water Year 2007

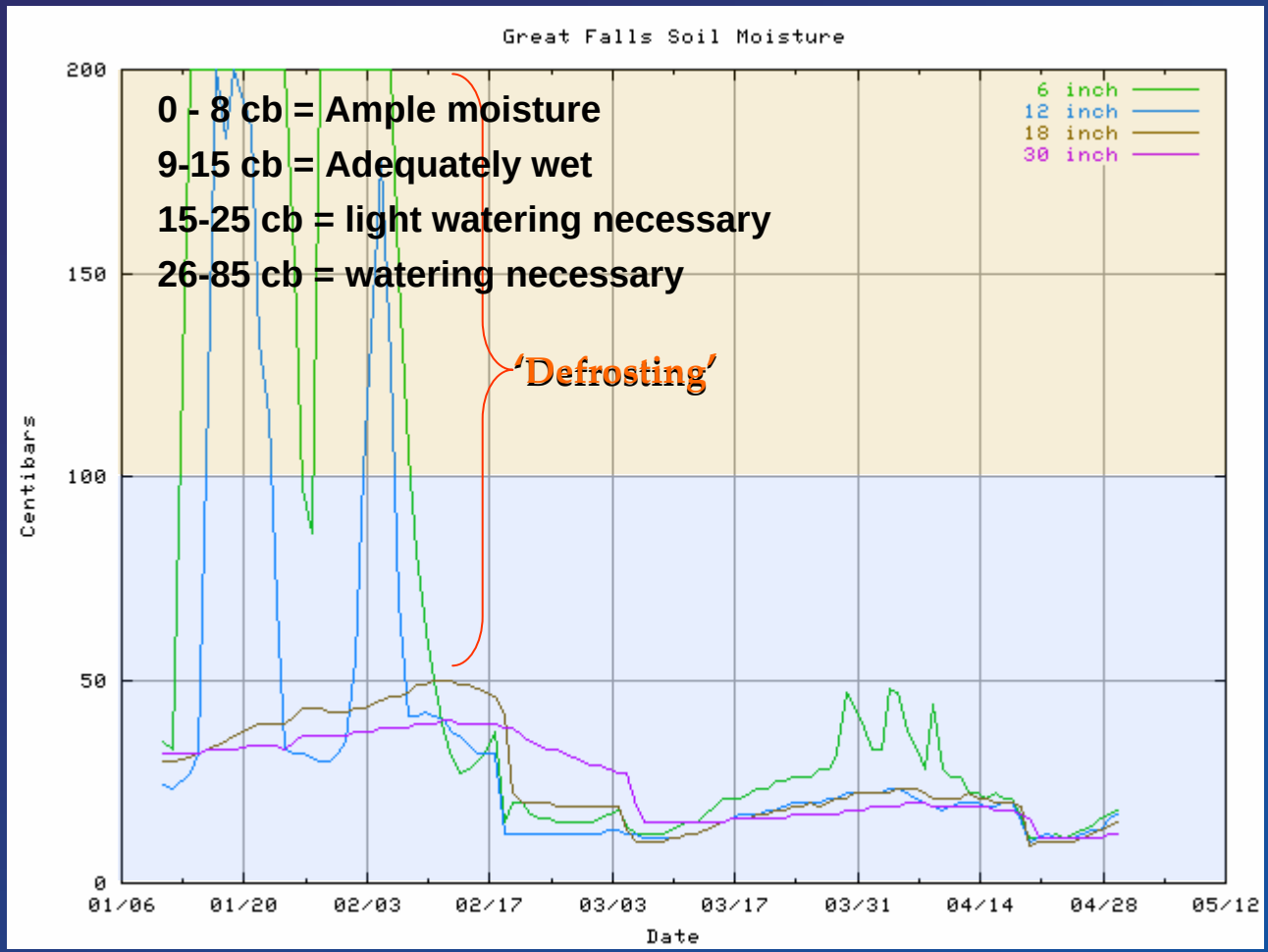
	APRIL 1 - 30				WATER YEAR TO DATE			
	ACTUAL PCPN	NRML PCPN	+/- NRML	% OF NRML	ACTUAL PCPN	NRML PCPN	+/- NRML	% OF NRML
CENTRAL MONTANA								
BILLINGS	2.34	1.76	0.58	133	8.20	6.88	1.32	119
CASCADE 20 SSE	1.94	1.19	0.75	163	5.94	4.70	1.24	126
CHESTER	1.84	0.71	1.13	259	5.76	3.11	2.65	185
CHOTEAU	1.75	0.72	1.03	243	3.47	2.78	0.69	125
CONRAD	0.04	1.04	-1.00	4	1.59	3.98	-2.39	40
FORT ASSINNIBOINE	1.58	0.99	0.59	160	5.03	4.22	0.81	119
FORT BENTON	2.03	1.21	0.82	168	6.21	4.86	1.35	128
GOLD BUTTE 7 N	2.28	1.10	1.18	207	6.49	4.22	2.27	154
GRASS RANGE	2.00	1.44	0.56	139	7.41	5.70	1.71	130
GREAT FALLS	2.33	1.41	0.92	165	6.90	5.82	1.08	119
HAVRE	2.13	0.87	1.26	245	5.56	3.98	1.58	140
LIVINGSTON	2.83	1.58	1.25	179	8.90	6.05	2.85	147
LEWISTOWN	1.59	1.38	0.21	115	6.86	6.63	0.23	103
MARTINSDALE 3 NNW	1.03	1.20	-0.17	86	4.71	4.51	0.20	104
NEIHART 8 NNW	1.95	1.84	0.11	106	11.15	8.21	2.94	136
STANFORD	1.47	1.54	-0.07	95	6.17	5.98	0.19	103
VALIER	1.84	0.92	0.92	200	3.73	3.31	0.42	113
WHITE SULPHUR SPRGS	0.97	1.18	-0.21	82	3.58	4.77	-1.19	75
EASTERN MONTANA								
GLASGOW	0.89	0.75	0.14	119	3.41	3.32	0.09	103
MILES CITY	1.35	1.40	-0.05	96	4.15	4.90	-0.75	85

Statewide Average Precipitation

April a mix of winter and summer type precipitation

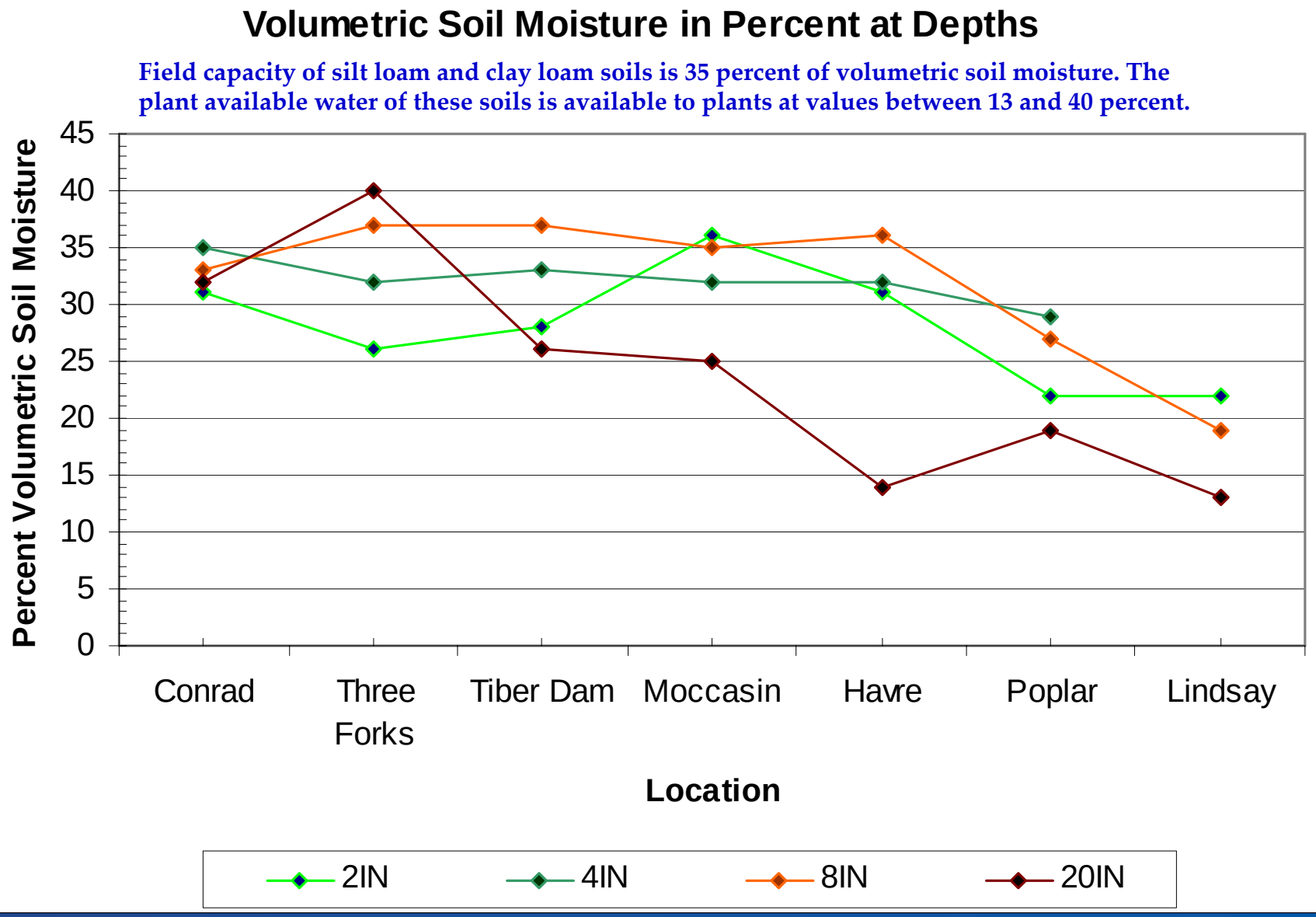


Great Falls Soil Moisture

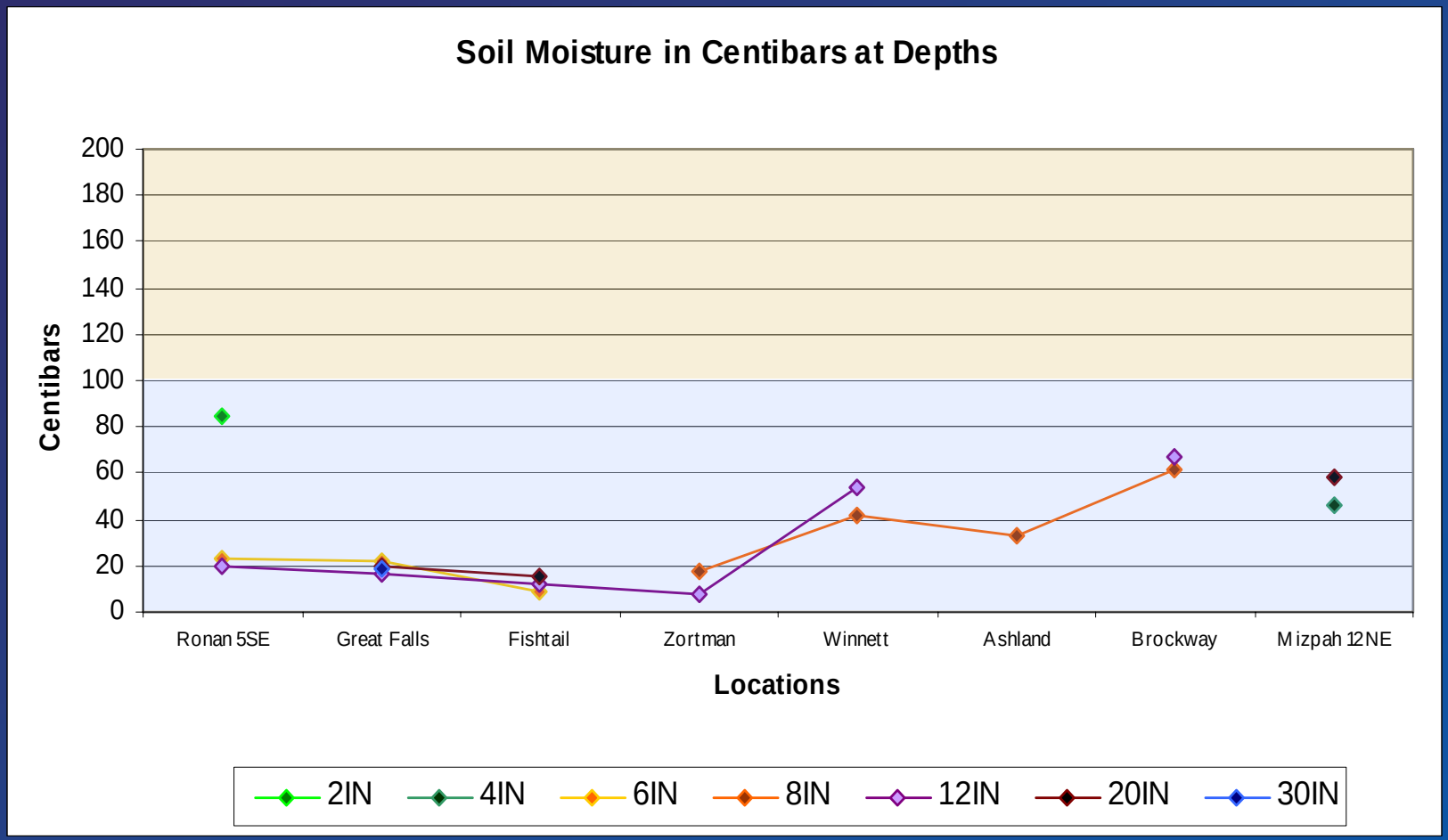


- **All levels moist**
  - ***15 to 25 cb***

Expanding Soil Moisture Network

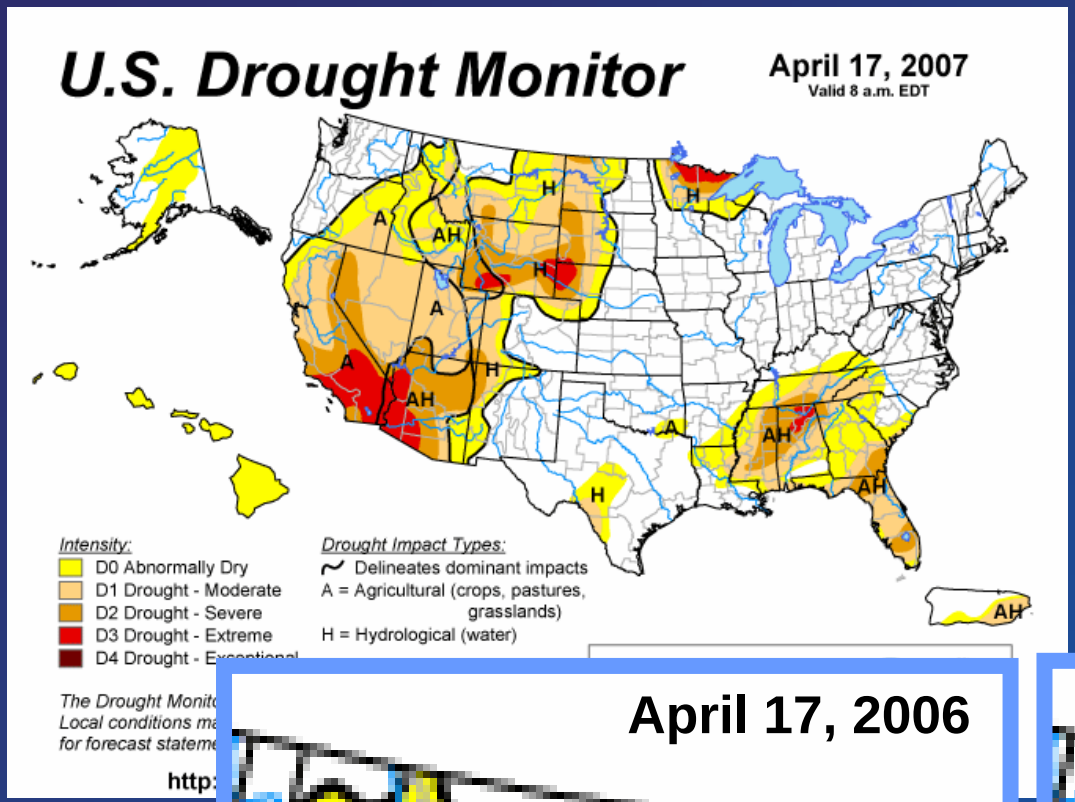


Expanding Soil Moisture Network

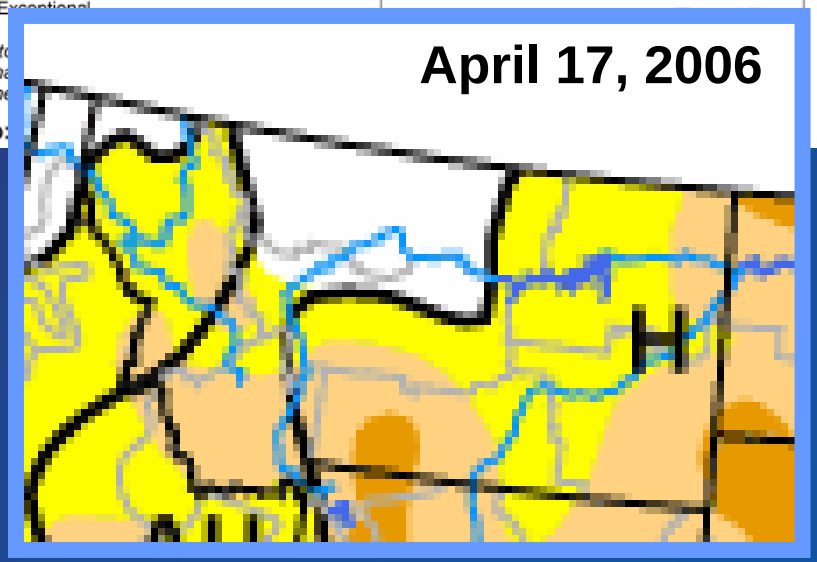


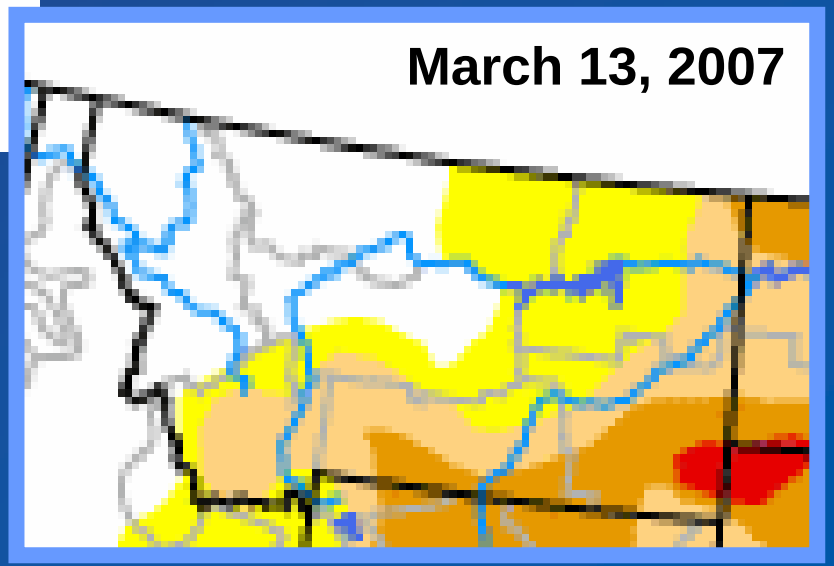
Conversion of centibars to available water in loam and clay/loam soils...
10cb or less...More than 95 percent plant available water
10-30cb.....75 - 95 percent plant available water
30-50cb.....55 - 75 percent plant available water
50-70cb.....45 - 55 percent plant available water
80-85cb.....38 - 40 percent plant available water
85cb or more...No available water

National Drought Monitor
Issued April 17, 2007

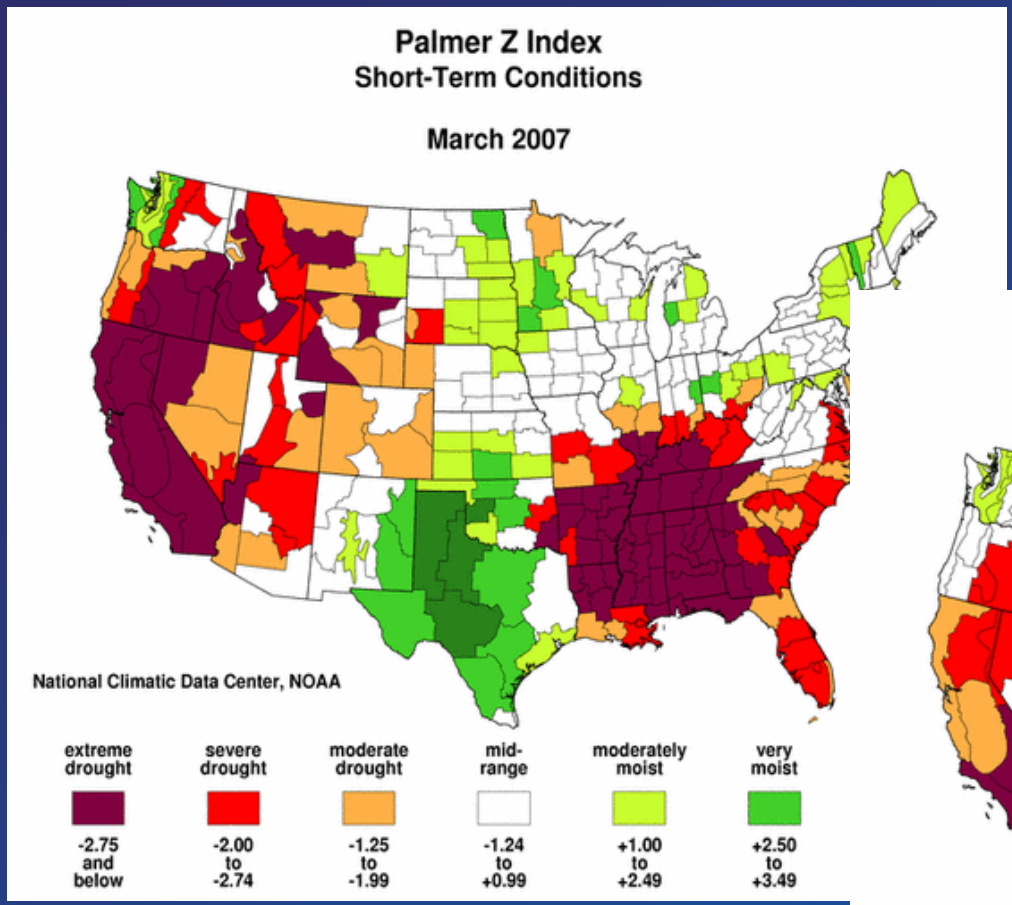


- Western...southern and eastern Montana showing Moderate (D1) to Severe Drought (D2)
- Isolated area of Extreme (D3) in southeast removed
- Abnormally Dry (D0) and Moderate Drought (D1) introduced west of divide

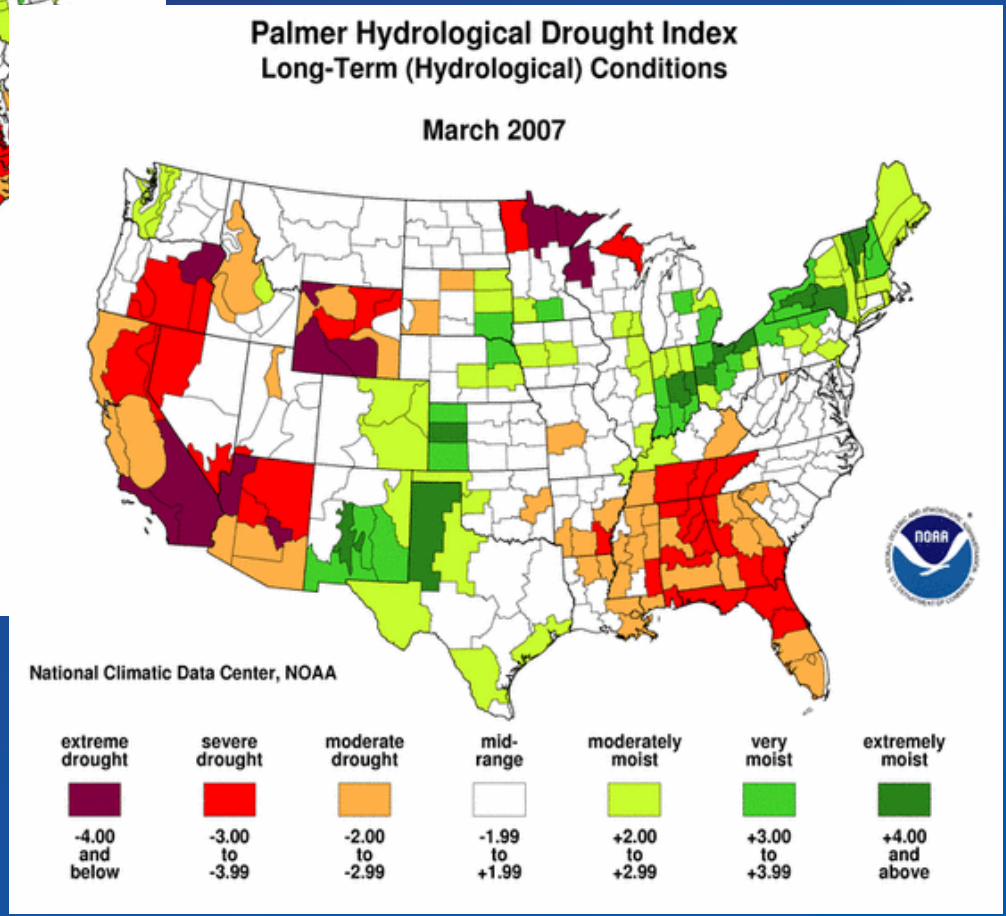




Palmer Hydrological Drought Index
March 2007

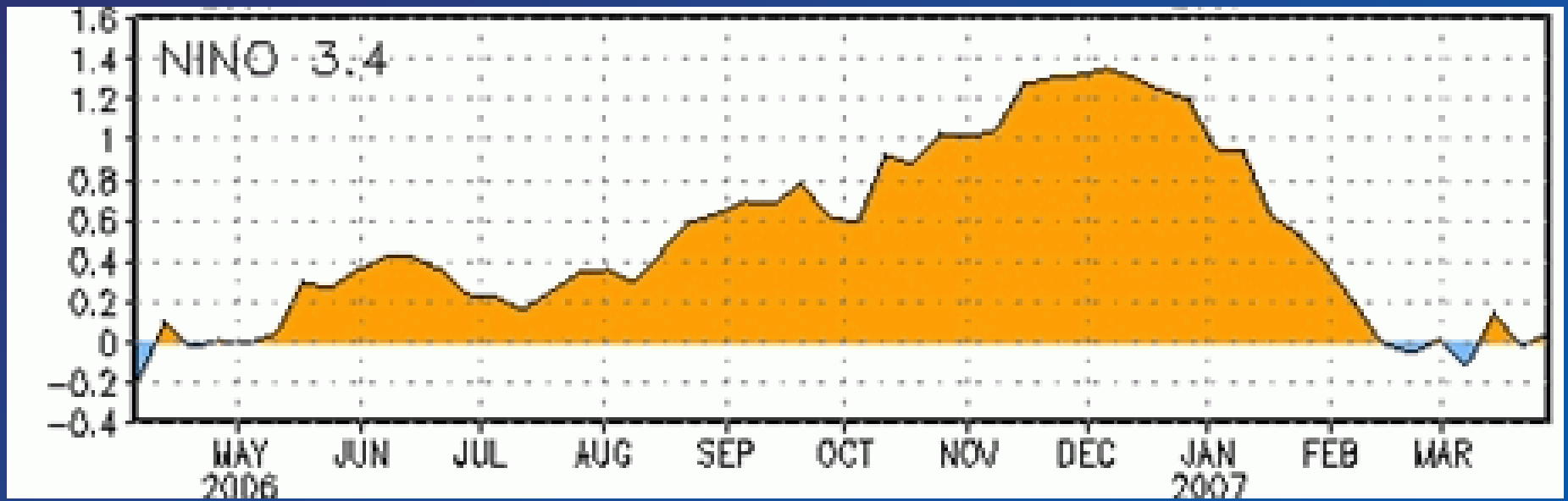


- No Montana climate divisions classified as either ‘moist’ or ‘drought’ for long-term conditions



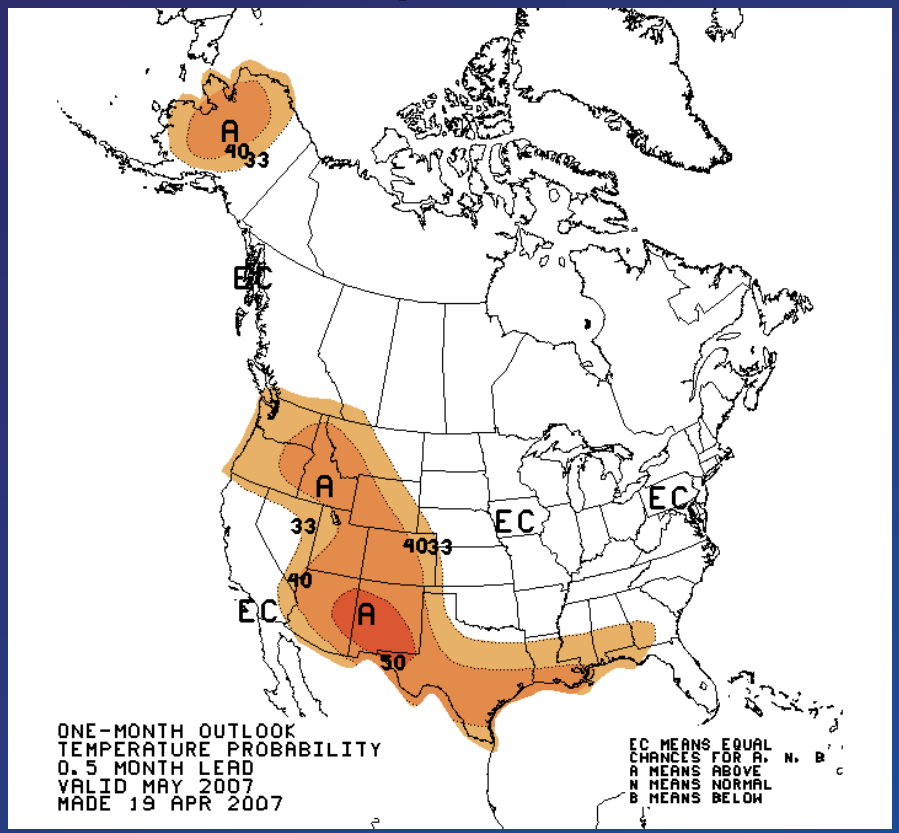
El Niño / La Niña

- El Niño conditions (above normal sea surface temperatures) dominated during autumn and early winter
- El Niño conditions disappeared from eastern Pacific during February... currently in neutral phase
- Transition from neutral to La Niña conditions (below normal sea surface temperatures) possible during next 2-3 months



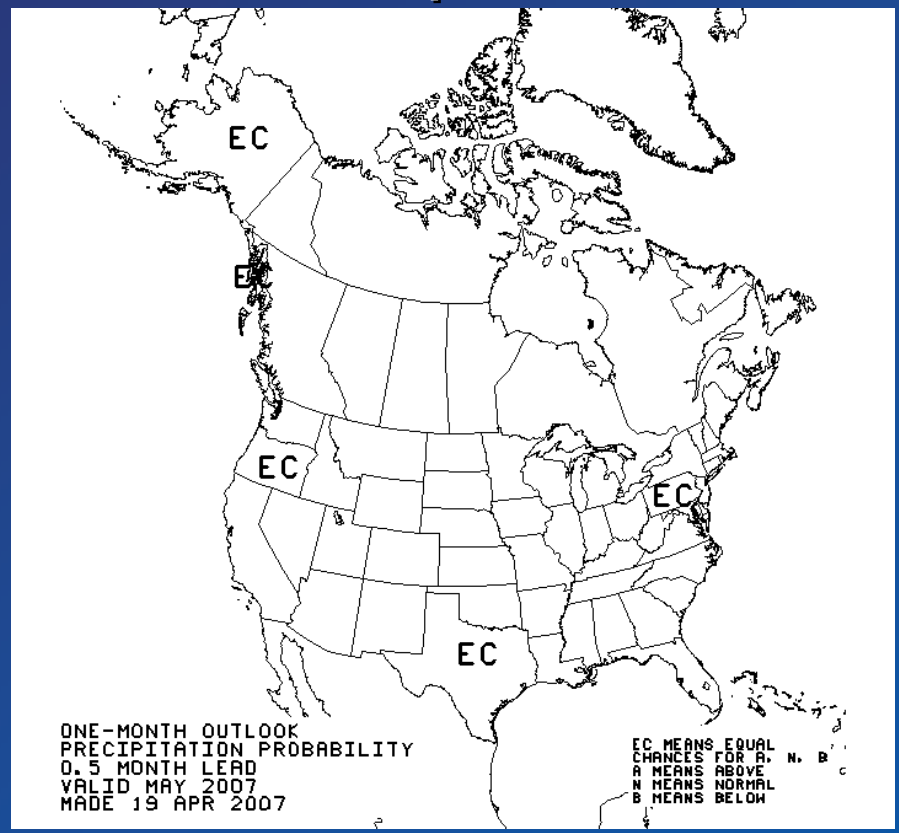
May Outlook

Temperature



- Better chances temperatures will be above normal over west and central Montana
  - *33% to 50% chance*
- Remainder of area shows no forecast skill...
  - *Equal chances temperatures will be above... below or near normal*

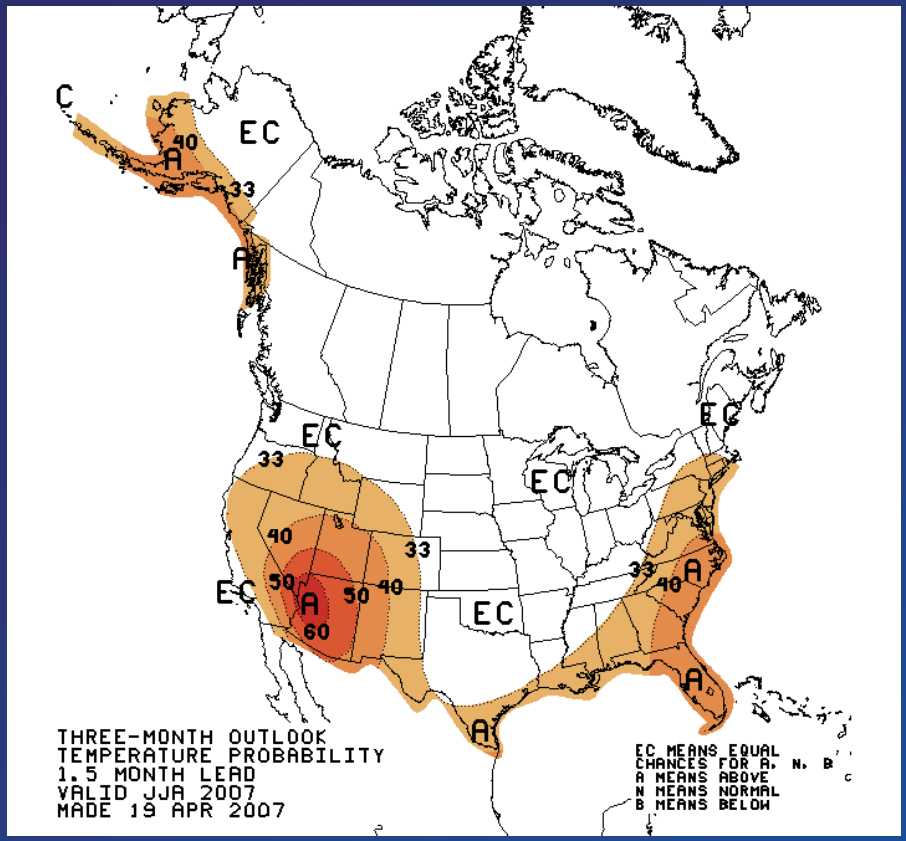
Precipitation



- No forecast skill across all of Montana...
  - *Equal chances precipitation will be above... below or near normal*

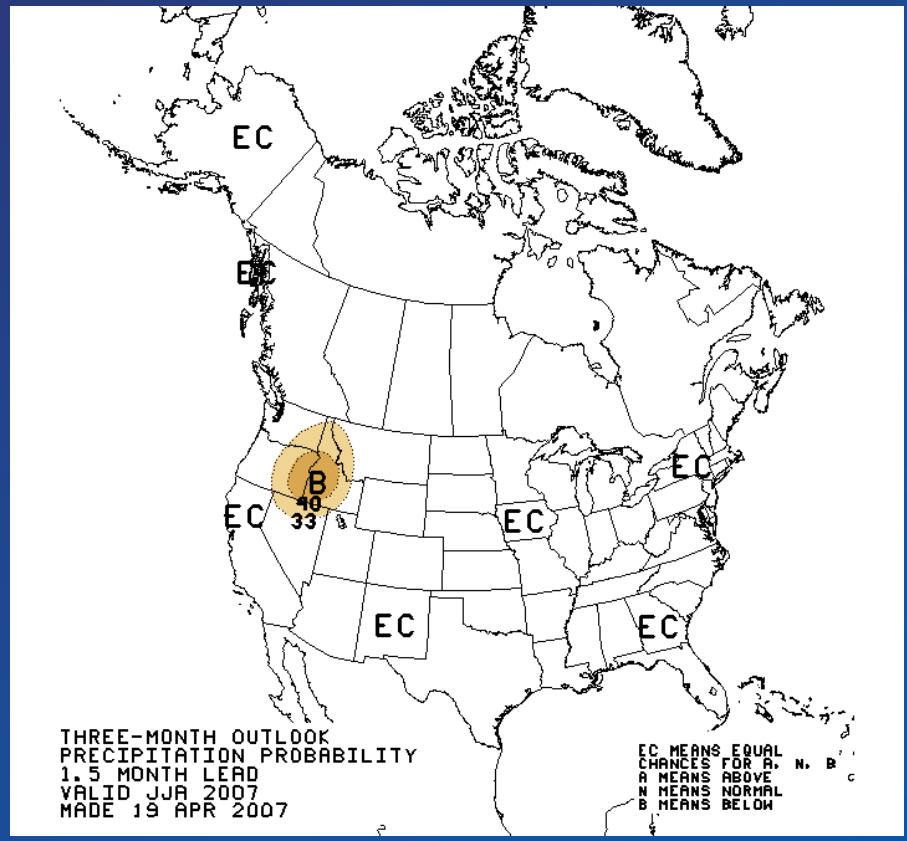
June – August Outlook

Temperature



- Most of Montana... no forecast skill...
  - *Equal chances temperatures will be above... below or near normal*
- Extreme southwest - 33% to 40% chance for above normal temperatures

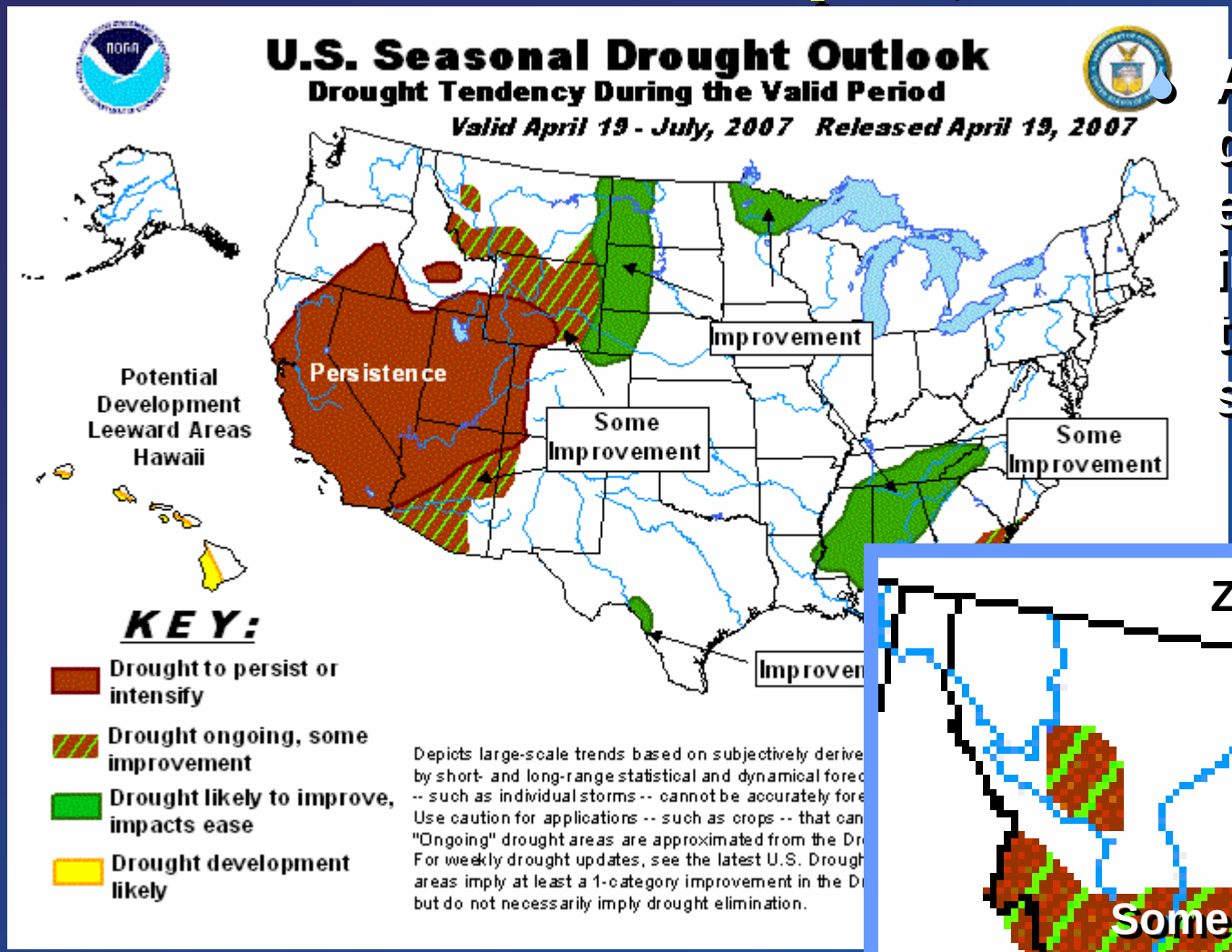
Precipitation



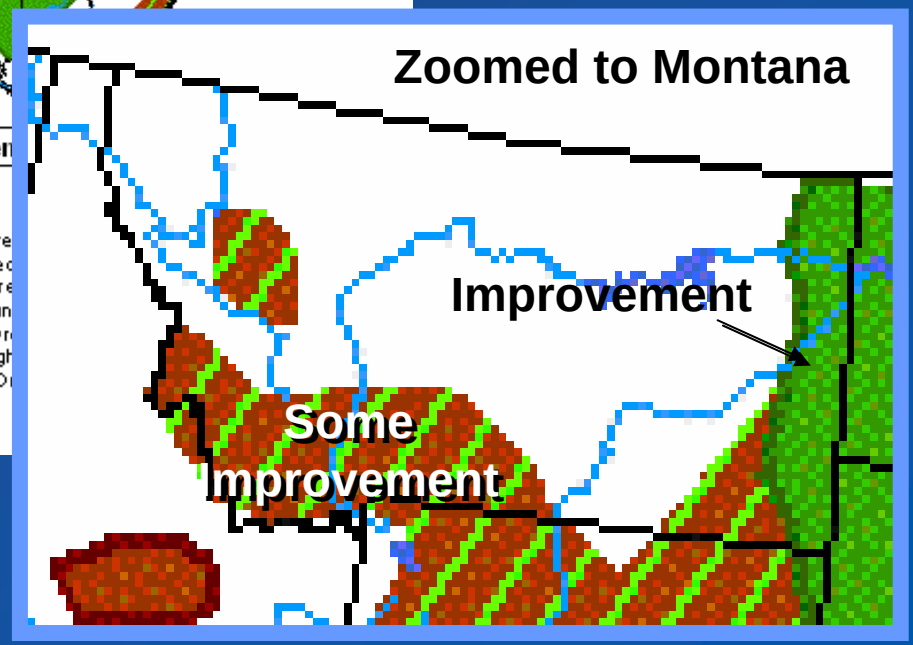
- Most of Montana... no forecast skill...
  - *Equal chances precipitation will be above... below or near normal*
- Extreme west - 33% to 40% chance for above normal precipitation

Drought Outlook through June

Issued April 19, 2007



Areas in drought status expected to improve some through the spring



To sum up...

- **Wet February was followed by a dry March**
  - ***Strong storm hit southeast Montana last half of last week of month bringing their water year totals from below to well below normal to above normal***
- **April dry so far for much of the state**
  - ***Northcentral has received some precipitation***
- **No significant precipitation trends in the forecast**
  - ***Both the May and June-August outlooks show no forecast skill with equal chances for above... below or near normal precipitation for most of the state***

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